

AMENDMENTS TO THE SPECIFICATION

Please amend paragraph [0038] as follows:

[0038] The gate electrode 452 has a length L extending from the pinned photodiode 421 to the floating diffusion region 404, which serves as a source/drain region for the transfer transistor. In a first exemplary embodiment of the invention, the transfer gate electrode 452 work-function is tailored by forming the transfer gate 450 comprising a layer of doped or undoped mid-gap material. Mid-gap materials are those materials having a work-function falling between the work-functions of p+ silicon (Si) and n+ Si or, otherwise stated, between the conduction band and valence band of Si. Mid-gap materials may be comprised of two or more constituent materials. Examples of such materials include Si_{1-x}Ge_x, TiN/W, Al/TiN, Ti/TiN, and TaSiN which are commonly used in semiconductor devices. Altering the mole fraction of the constituent material alloys in a mid-gap material alters the work-function of the mid-gap material.

Please amend paragraph [0070] as follows:

[0070] As shown in FIGS. 6A and 6B, gate region 650a extends beyond STI 609 and over the active area by a distance D_a. Similarly, gate region 650b extends beyond STI 609 and over the active area by a distance D_b. Distances D_a and D_b may be equal to or different from one another. In the illustrated embodiment, each region 650a, 650b extends across approximately the entire gate length L.

Please amend paragraph [0077] as follows:

[0077] Although additional embodiments in FIGS. 6A-7B show a transfer gate device having two or three gate regions having specific configurations, the invention is not limited to specific numbers or configurations. Accordingly, a gate may

Application No. 10/602,716
Amendment dated November 2, 2005
Reply to Office Action of August 2, 2005

Docket No.: M4065.0904/P904

also have more than three gate regions and the gate ~~regions~~ regions may have other configurations.